

Chapter 7/ Example 10

Using the finance app

Jack receives a loan of \$5000 from a bank at an annual interest rate of 7.5% compounded monthly. It is to be repaid in monthly instalments within a 5-year period.

- a** How much should the monthly instalments be in order to repay the loan on time?
b Jack starts repaying the \$5000 loan with the monthly instalments calculated in part **a**.
 How much will he still owe after the 10th instalment?

Press **MENU** **C** **TVM** **FF** Financial.

Press **F2** Compound Interest.

Compound Interest
 $n = 0$
 $I\% = 0$
 $PV = 0$
 $PMT = 0$
 $FV = 0$
 $P/Y = 12$
 n I% PV PMT FV AMORTZ

$N = 60$.
 $I\% = 7.5$.
 $PV = -5000$.
 $PMT = 0$.
 $FV = 0$.
 $P/Y = 12$.
 $C/Y = 12$.

Compound Interest
 $n = 60$
 $I\% = 7.5$
 $PV = -5000$
 $PMT = 0$
 $FV = 0$
 $P/Y = 12$
 n I% PV PMT FV AMORTZ

Press **F4** PMT to get the answer.

The GDC gives the amount of the monthly instalments (PMT) to be \$100.19.

Compound Interest
 $PMT = 100.189743$
 REPEAT AMORTZ GRAPH

Press **F1** REPEAT.

$N = 10$.
 $I\% = 7.5$.
 $PV = -5000$.
 $PMT = 100.19$.
 $FV = 0$.
 $P/Y = 12$.
 $C/Y = 12$.

Compound Interest
 $n = 10$
 $I\% = 7.5$
 $PV = -5000$
 $PMT = 100.19$
 $FV = 0$
 $P/Y = 12$
 n I% PV PMT FV AMORTZ

Chapter 7/ **Example 10**

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Press **F5** FV to get the answer.

The GDC gives the amount of amount of principal that remains to be repaid to be \$4290.88.

Compound Interest
FV =4290.883908

REPEAT

AMORTZ

GRAPH